

**Claims:**

1. An isolated human H2R polynucleotide which codes without interruption for an amino acid sequence set forth in SEQ ID NO 2, or a complement thereto.
- 5 2. An isolated human H2R polynucleotide comprising,  
polynucleotide sequence having 95% or more sequence identity to the polynucleotide  
sequence set forth in SEQ ID NO 2 and which codes without interruption for H2R, or a  
complement thereto.
- 10 3. An isolated H2R polynucleotide, comprising:  
a polynucleotide coding for amino acids 360-422 of SEQ ID NO 2, specific  
fragments thereof, or complements thereto
- 15 4. An isolated H2R polynucleotide of claim 3, consisting of:  
amino acids 360-422 of SEQ ID NO 2.
5. An isolated H2R polynucleotide of claim 3, wherein said fragment is effective in a  
polymerase chain reaction.
- 20 6. An isolated human H2R polypeptide coded for a polynucleotide of claim 1,  
comprising: the amino acid sequence set forth in SEQ ID NO 2.
7. An isolated human H2R polypeptide coded for a polynucleotide of claim 2,  
comprising: an amino acid sequence having 95% or more sequence identity to the amino  
25 acid sequence set forth in SEQ ID NO 2.
8. An isolated H2R polypeptide coded for by a polynucleotide of claim 3,  
coding for amino acids 360-422 of SEQ ID NO 2 or specific fragments thereof.
- 30 9. An isolated H2R polypeptide of claim 8, consisting of:  
amino acids 360-422 of SEQ ID NO 2.

10. A method for identifying an agent that modulates the biological activity of a human H2R in mammalian cells expressing a human H2R of claim 2, comprising:

- 5       contacting mammalian cells expressing human H2R with a test agent under  
conditions effective for said test agent to modulate the biological activity of said human H2R,  
wherein said cells are transformed with a polynucleotide construct comprising an expressible  
human H2R polynucleotide, whereby said H2R expression is achieved, and  
determining whether said test agent modulates said H2R.

10 11. A method of claim 10, wherein said agent is a polynucleotide coding for a peptide  
selected from amino acids 360-422 of SQ ID NO 2.

12. A method of claim 10, wherein said human H2R has the amino acid sequence set  
forth in SEQ ID NO 2.

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13. A transformed mammalian cell comprising:  
a polynucleotide construct comprising a human H2R polynucleotide of claim 2  
operatively linked to expression control sequences.

20 14. A transformed cell of claim 13, wherein said human H2R polynucleotide has the  
sequence set forth in SEQ ID 1.

15. A transformed cell of claim 13, wherein said human H2R polynucleotide has the  
amino acid sequence set forth in SEQ ID 2.

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16. A transformed cell of claim 13, wherein said expressible human H2R polynucleotide is  
integrated into the chromosome of said cell.

17. An isolated antibody which is specific for a polypeptide having amino acids 360-422 of  
30 SEQ ID NO 2, or specific fragments thereof.